

RECEIVED INDIAN & NORTHERN AFFAIRS
ENVIRONMENTAL IMPACT SCREENING COMMITTEE

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10 December 2001

Submission Number: 11/01-02

Rob Jefferies
Manager Frontier Operations
Anadarko Canada Corporation
425 1st Street SW
Calgary AB T2P 4V4



Mr. Jefferies:

RE: Anadarko Canada Corporation (Jefferies), Immerk Winter 2001/2002 2D Seismic Program

During a meeting held 3-5 December 2001, the Environmental Impact Screening Committee (EISC) screened the above-noted project description. Based on the information provided, the EISC decided that the development will have no significant negative impact on the environment or Inuvialuit wildlife harvesting in the Inuvialuit Settlement Region [IFA Section 11.(13)(a)]. A copy of the decision has been attached.

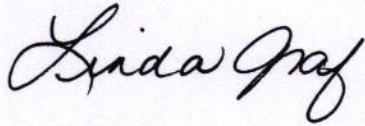
Subject to a final decision by the licensing or permitting authority, the issuance of appropriate permits and approvals may proceed.

In rendering its decision, the EISC assumed that Anadarko is committed to carrying out the mitigative measures mentioned in the text and listed in Table 19 of its project description, and that Anadarko's contractors and sub-contractors will adhere to those mitigative measures.

Comments on your proposed program were submitted to the EISC by several groups. They are being forwarded to you for your consideration. We note that you have received some of the letters already. However, they have been attached for the benefit of those copied on this letter.

Please contact me if you have any questions.

Regards,



Linda Graf
Secretary

cc: Dennis Arey, Aklavik HTC
Terry Baker, National Energy Board, Calgary
Richard Binder, Inuvik HTC
Rudy Cockney, DIAND, Inuvik
Greg Cook, Water Resources, DIAND, Yellowknife
Paul Latour, CWS, Yellowknife
Frank Pokiak, Tuktoyaktuk HTC
Gordon Wray, N.W.T. Water Board, Yellowknife

Encl. (7) EISC Decision
Letter from Tuktoyaktuk HTC, Dated 20 November 2001
Letter from FJMC, Dated 28 November 2001
Letter from the Inuvik HTC, Dated 29 November 2001
Letter from RWED, Dated 3 December 2001
Letter from DFO, Dated 4 December 2001
Letter from PWNHC, Dated 5 December 2001



ENVIRONMENTAL IMPACT SCREENING COMMITTEE

SUBMISSION NUMBER: 11/01-02

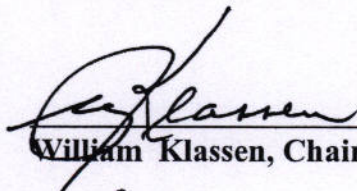
NAME OF PROPONENT: Anadarko Canada Corporation, Rob Jefferies

PROJECT DESCRIPTION: *Immerk Winter 2001/2002 2D Seismic Program*

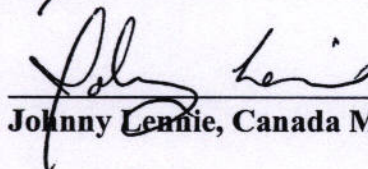
DECISION OF THE SCREENING PANEL (circled):

1. The development will have no such significant negative impact and may proceed without further environmental impact assessment and review under the Inuvialuit Final Agreement. [IFA s. 11. (13) (a)]
2. The development could have significant negative environmental impact and is subject to assessment and review under the Inuvialuit Final Agreement. [IFA s. 11. (13) (b)]
3. The development proposal has deficiencies of a nature that warrant a termination of its consideration and the submission of another project description. [IFA s. 11. (13) (c)]

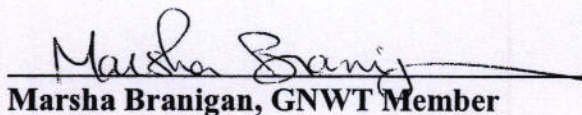
Signed on the 4 day of DECEMBER, 2001.



William Klassen, Chair



Johnny Lennie, Canada Member



Marsha Branigan, GNWT Member

Chuck Hubert, YTG Member



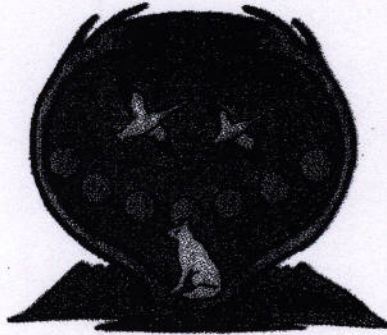
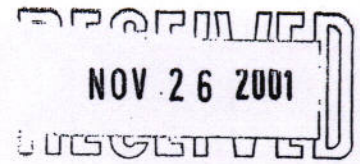
Billy Day, Inuvialuit Member



Alex Kaglik, Inuvialuit Member

Fred Wolki, Inuvialuit Member

Tuktoyaktuk Hunters & Trappers Committee



P.O. Box 286, Tuktoyaktuk, N.W.T. X0E 1C0 • Phone (867) 977-2457 • Fax (867) 977-2433

November 20, 2001

Linda Graf, Secretary
Environmental Impact Screening Committee
Box 2120
Inuvik, NWT X0E 0T0

Dear Linda:

RE: AEC West Ltd. - Kamik 2D Winter 2001/2002 Seismic Program
Anadarko Canada Corporation, Immerk Winter 2001/2002 2D Seismic Program

The Tuktoyaktuk Hunters and Trappers Committee held a consultation meeting with representatives from AEC West Ltd. and Anadarko Canada Corporation on October 18, 2001 to discuss the project descriptions for seismic work. The following are concerns raised by the Board:

- signs to be erected for access roads (safety reasons)
- do not disturb any archeological sites that may be in the area
- wildlife and environmental monitors must be hired for the duration of the project, keep in mind that these positions must remain separate

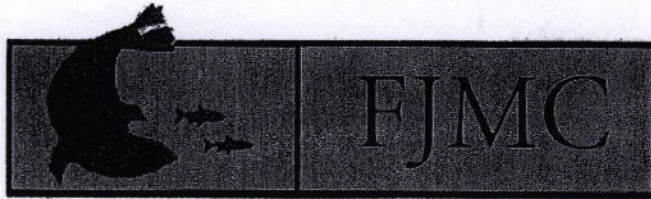
If you have any further questions please do not hesitate to call our office at 977-2457.

Sincerely,

for Frank Pokiak
Chairman

cc Inuvialuit Land Administration
Tuktoyaktuk Community Corporation
Tuktoyaktuk Elders Committee
Inuvialuit Game Council

NOV 28 2001



**FISHERIES JOINT
MANAGEMENT COMMITTEE**

Joint Secretariat - Inuvialuit Renewable Resource Committees
Box 2120, Inuvik, NT, X0E 0T0
Tel: 867.777.2828 Fax: 867.777.2610 Email: fjmc@jointsec.nt.ca

November 28, 2001

Bill Klassen, Chair
Environmental Impact Screening Committee
Box 2120
Inuvik, NT
X0E 0T0

Dear Mr. Klassen:

Re: Comments on 2001/02 Industry Submissions before EISC December 2001

During our last regular meeting and community tour (November 19-23, 2001), the Fisheries Joint Management Committee had the opportunity to discuss 2 industry proposals before EISC in early December. This letter contains our comments and concerns on these submissions¹.

While this Committee has no specific concerns about these proposals, we hope that the various federal (DFO, INAC) and regional agencies (ILA) with responsibilities to inspect oil & gas operations in the Beaufort-Delta will be out on the land in full force this winter to ensure industry compliance with commitments made in these submissions and the multitude of others this Committee has commented on over the past few months.

On behalf of the Committee, thank you for giving the FJMC this opportunity to comment on these proposals before EISC.

Sincerely,

Robert K. Bell
Chairman

cc: Ron Allen, DFO; Redmond Clarke, DFO; Rudy Cockney, INAC; Robert Hornal, EIRB;
Duane Smith, IGC; Norm Snow, JS; Peter Cott, DFO; Hans Arends, ILA

¹ AEC West Ltd- Kamik 2D Winter 2001/02 Seismic Program; Anadarko Canada Corporation- Immerk Winter 2001/02 2D Seismic Program.

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EISC
Box 2120
Inuvik NT.
XOE-OTO

November 29, 2001

Re: Anadarko Canada Corporation Immerk Winter 2001/2002 2D Seismic Program

Dear Linda,

We received the above noted project description. There are a number of issues raised resulting from programs that were conducted last year, that still apply, those are;

: To ensure that there is sufficient ice to prevent vehicles from going through the ice, to avoid potential negative impacts to fish, habitats and water quality.

: A number of our people use various travel routes (portages) through out the delta, and surrounding areas. If the program right of way or travel route crosses over these, the banks should be cleared so that it does not create a problem for people who rely on these routes to get from one place to another.

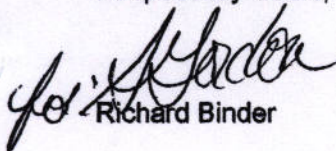
: Company equipment (included contractors) should stay on the right of way. We have received a number of reports of equipment traveling all over the place. This was evident when we flew over some other programs last summer. We realize that there may not be any long-term impacts, however they should minimize this by staying on their right-of-way. In some classes it may be unavoidable.

: The banks of rivers, lakes and coastal regions are very vulnerable to slumpage and erosion. Approached should be constructed to avoid any negative impacts to these areas.

: On a final note, wildlife monitor must be hired for all projects. The HTC's have the mandate to supply these monitors.

If you have any questions in regards to any of the above, please give us a call at (867) 777-3671

Respectfully Yours,


Richard Binder

C/c
Tuk HTC
Aklavik HTC
Sachs HTC
Paulatuk HTC
Holman HTC
IGC
IRC
ILA
AEC West
DIAND Inuvik



Northwest Territories Resources, Wildlife and Economic Development

December 3, 2001

Via Fax

Ms. Linda Graf
Secretary
Environmental Impact Screening Committee
The Joint Secretariat - Inuvialuit Renewable Resource Committees
P.O. Box 2120
Inuvik, NT X0E 0T0

Dear Ms. Graf:

Environmental Impact Screening: Anadarko 2D seismic Program Mackenzie Delta

The Department of Resources, Wildlife and Economic Development (RWED) has reviewed the above proposal for remediation of the West channel, and would like to submit the following comments for the consideration of the Environmental Impact Screening Committee.

General Comments

Figure 2 shows one base camp and two semi-permanent camps, but the Project Description describes only one camp. The EISC may wish to obtain further information about any camp operations that will be located on marine ice, describing the extra environmental measures that will be applied in recognition of the sensitivity of the marine environment, such as enhanced secondary containment of contaminants.

Figure 3 shows a lot of past seismic activity, but no mention is made about how this past activity has affected wildlife and wildlife habitat in the region. The EISC may wish to obtain further information on such impacts from harvesters active historically in the area. Anadarko along with other operators and Canadian Wildlife Service will be conducting a study to determine the impacts of seismic activity on the habitat in the Kendall Island Bird Sanctuary which will contribute further understanding of the impacts of historical seismic activity.



Anadarko should provide a description of how disturbed tundra areas will be reclaimed, if reclamation is considered necessary.

Waste Disposal

For Anadarko camp operations they are proposing to obtain water and dispose of sewage at Inuvik's facilities, with garbage being disposed of at either Inuvik's or Tuktoyaktuk's facilities. Municipal facilities were designed to meet the needs of the residents of the community. The facilities may not be large enough to handle additional usage from industrial undertakings. Companies should look at ways to help the communities expand their facilities in order to meet this growing demand, or treat their own water and sewage.

Wildlife/Vegetation

Anadarko states that any windrows created by snow removal on the lines will be broken every 500 m to provide unimpeded wildlife movement. The Department has a guideline for windrow breaks established for the Enbridge Pipeline which we wish to suggest for the EISC's consideration. Breaks in windrows should be every 60m and be 10m in width. The above interval maximizes the opportunities for wildlife to both cross the right of way and to escape from the right of way should they encounter vehicles or humans along it.

RWED's Inuvik office should be contacted to discuss the exact seismic line locations, once they are determined, so that impacts to denning bears can be avoided.

Spill Contingency Plan

A site specific Spill Contingency Plan should include the following;

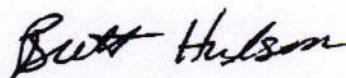
- A site map showing the location of the spill response equipment and the fuel storage and transfer locations.
- A complete list of spill response equipment.
- Does Anadarko have permission to use the spill response equipment located at Swimming Point?
- One of the containment options lists plastic sheeting as a method of containing a spill. There is no plastic sheeting on the equipment list on page 4
- A description of the spill training provided to employees responding to a spill.
- A better description of the spill containment methods will help the personnel responding to a spill.
 - A better description of the disposal options should be provided. Regulatory approval is required on each spill to determine the appropriate disposal/treatment option. There is no GNWT Renewable Resources and RWED does not recommend leaving contaminated soil in place and allowing the hydrocarbon contaminant allowed to biodegrade.
- The applicant should notify any member of the public who might be affected by the spill, regardless if the spill is reportable or not.

- **Material Safety Data Sheets should be included in any Spill Contingency Plan to provide information to assist in the safe handling of the spilled product.**

Finally, it would have been useful if Anadarko had provided a more detailed map showing the access route into the seismic program area. For future projects, a more detailed map of the access routes will allow reviewers to determine if the route is following existing access routes, and if there is any sensitive or steep areas.

Thank you for considering these comments.

Sincerely,



**Brett Hudson
Environmental Assessment
Analyst
RWED**

c. **Rudy Cockney
District Manager,
DIAND**



Fisheries
and Oceans

Pêches
et Océans

Fish Habitat Management
P.O. Box 1871
Inuvik, Northwest Territories
X0E 0T0

Your file *Votre référence*

Our file *Notre référence*

SC01081

December 4, 2001

Anadarko Canada Corporation
425 1st Street West
Calgary, AB
T2P 4V4

Attention: Rob Jeffries

**RE: Anadarko Canada Corporation Immerk 2D Winter 2001/2002 Seismic Program -
DFO Letter of Advice**

Dear Mr. Jeffries:

The Department of Fisheries and Oceans, Fish Habitat Management – Western Arctic Area (DFO) received the project description for the proposed Anadarko 2D seismic program. This letter is to advise that I have reviewed the proposal and am providing the following comments on behalf of DFO.

It is my understanding from the information provided that:

- The program will entail the 2D seismic exploration totalling approximately 417 linear km.
- Specialized drill technology will be used to conduct seismic in all waterbodies greater than 400 m in width and the near-shore areas of the Beaufort Sea not frozen to the bottom. The remainder of the program will be conducted using vibroseis (which is a non-explosive technique).
- No sumps are associated with any of the camps. All sewage and grey water will be collected in a holding tank and transported to a suitable treatment facility in Inuvik. Solid refuse will be incinerated or transported as well.
- Anadarko has restricted its lines to areas outside of Beluga Management Plan Zone 1(a).

Since the proposed seismic work will occur on and/or near waterbodies, including the Beaufort Sea and the Mackenzie estuary, I have concluded that the proposed work may result in the harmful alteration, disruption or destruction of fish habitat. The following mitigation measures, if implemented, should prevent any potentially harmful impacts to fish and fish habitat. This list includes measures outlined in the proposal.

- **The use of explosives within waterbodies that do not have bottom fast ice should be avoided if possible.**
- **Prior to any seismic activity taking place in waterbodies not frozen to the bottom and where dynamite is to be used as the energy source, DFO must be satisfied that all conditions specified in the June 13, 2001 DFO letter (attached for your convenience) have been met.**
- **All charges deployed under waterbodies not completely frozen to the bottom should be buried a minimum setback of 15 m below the lakebed. (The set back shall be measured from the start of the consolidated material layer below the lakebed to the top of the buried charge). Please note that it states on page 12 of the proposal that:**

"...drillers will be instructed to attain a minimum depth of 9.5 m below the consolidated material or hardpan at the bottom of the waterbody, or as otherwise agreed to with DFO."

It is the position of DFO that a 9.5m burial depth for charges below lakes not frozen to the bottom is insufficient and a minimum setback of 15 m is required.

- **Only charges of 2 kg or less shall be used in waterbodies not completely frozen to the bottom.**
- **Access routes should follow existing trails, winter roads or cut lines where possible to minimize unnecessary clearing of vegetation and soil compaction. Vegetation is critical for the protection of littoral and riparian fish habitats since it provides cover and enhances bank stability. DFO is pleased that Anadarko and Burlington Resources Canada Energy Ltd will be sharing access routes.**
- **Mechanized clearing should not occur within 100 metres of any stream or lake to protect bank stability, avoid soil compaction and retain riparian vegetation.**
- **If winter road construction, camp use, etc. requires water in sufficient volume that the source waterbody may be drawn down, please submit details (volume required, size of waterbody, etc.) to DFO for review. It states on page 16 of the proposal that :**

"No water will be taken from a land -locked waterbody where drawdown and related fisheries concerns may be an issue."

DFO does not recommend the use of land - locked waterbodies that have no in-flow or out-flow systems as water sources.
- **Water intakes should be properly screened with fine mesh to prevent the entrainment of fish. Please refer to the *Freshwater Intake End-of-Pipe Fish Screen Guideline* (DFO, 1995) available upon request.**
- **"Mushroom shoes" or "boots" on the blades of vehicles, such as a loader, are recommended as a protective measure to minimize ground disturbance and erosion.**

- Cutting of crossing approaches should not be conducted unless approved in writing by DFO. The preferred method for crossings to avoid bank cutting is with the construction of snow ramps.

Note: The use of material other than ice or snow to construct a temporary crossing-over of any ice-covered stream is prohibited under Section 11 of the Northwest Territories Fishery Regulations, unless authorized by a Fishery Officer.

- Winter crossings should not impede water flow and should be v-notched or otherwise removed prior to spring break-up.
- Reclamation activities should include bank stabilization and re-vegetation as required. This work should be completed prior to spring thaw.

Depositing deleterious substances into fish bearing waters is prohibited as stated under subsection 36(3) of the *Fisheries Act*. The following additional mitigation measures are intended to prevent the deposition of deleterious substances and possible habitat disturbance or loss:

- All activities including maintenance procedures and vehicular refuelling should be controlled to prevent the entry of petroleum products, debris, slash, rubble, or other deleterious substances into the water.
- All wastes, drill cuttings, sewage and wastewater containments, should be located a minimum of 100 metres from any water body if possible, and be sufficiently bermed or otherwise contained to ensure that these substances do not enter any waterbody.
- Fuel storage should have secondary containment (such as doubled walled tanks, berms etc.) that is sufficient to ensure that fuel will not be able to enter any waterbody.
- No material should be left on the ice when there is the potential for that material to enter the water (i.e. spring break-up).
- A spill contingency plan should be made available to all persons required to work on site and followed in the event of a spill.
- All spills of oil, fuel, or other deleterious material should be reported immediately to the 24-Hour Spill Line at (867) 920-8130 as well as the National Energy Board as per their regulatory provisions.

If the proposed work is carried out as described in the plans provided to DFO and mitigation measures are implemented as required, the proposed work will not be considered as contravening subsection 35(1) of the *Fisheries Act* which reads:

"No person shall carry on any work or undertaking that results in the harmful alteration, disruption or destruction of fish habitat."

Therefore, an Authorization under subsection 35(2) of the *Fisheries Act* will not be necessary. If the harmful alteration, disruption or destruction of fish habitat and/or the deposition of deleterious substances into fish bearing waters occurs as a result of an

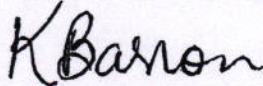
unapproved change in the plans for the proposed works or failure to implement the necessary mitigative measures, prosecution under subsection 35(1) and/or subsection 36(3) of the *Fisheries Act* may be initiated.

However, as previously stated all conditions contained in the June 13, 2001 DFO letter must be met to DFO's satisfaction prior to the approval of any seismic activity taking place in waterbodies that are not frozen to the bottom and where dynamite is to be used as the energy source.

Please note that this Letter of Advice does not release the proponent of the responsibility for obtaining any permits that may be required.

This Letter of Advice should be kept on site during any work in or around water and be understood by staff working at the site.

If you have any questions, please contact Pete Cott at (867) 777-7520 or me at (867) 777-7521 or by fax at (867) 777-7501.



Kathleen Barron
Habitat Biologist
Fish Habitat Management
Department of Fisheries and Oceans- Western Arctic

Attached: June 13, 2001 letter regarding DFO conditions for seismic on waterbodies.

Copy: Pete Cott, Area Habitat Biologist - DFO
Bruce Hanna, Habitat Biologist-DFO
Gerry Leering, Habitat Biologist - DFO
Mark Simms, Fishery Officer- DFO
Linda Graf - Environmental Impact Screening Committee
Brian Collins- DIAND, Water Resources
R.A. Cockney- DIAND, Land Administration
Ed McLean - Fisheries Joint Management Committee
Hans Arends - Inuvialuit Land Administration
John Korec - National Energy Board

Rec'd 5 Dec 2001

201-24



Northwest Territories Education, Culture and Employment

November 5, 2001

Ms. Linda Graf
Environmental Impact Screening Committee
P.O. Box 2120
Inuvik, NT X0E 0T0

BY FAX 867-777-2610

Re: **Andarko Canada Corp., Immerk Winter 2001/2002 2D Seismic Program (11/01-02)**

We have reviewed the submission and based on our experience and knowledge of the region, as well as on the recommendations presented in the proponent's application, we recommend that the project be permitted, but with the following conditions:

- that the proponent be directed to remain at least 30 metres from the boundaries of all known archaeological sites;
- that the proponent be urged to proceed with caution in all operations as the area exhibits a reasonable potential for locating new archaeological sites;
- that the proponent be directed to conduct a follow-up study next summer to assess potential impacts to heritage resources as a result of this winter's activities.

Sincerely,

Barbara Cameron
Acting Director,
Culture, Heritage and Languages Division

Prince of Wales Northern Heritage Centre

cc. Hans Arends, I.L.A., (Fax: 977-2467)

